

1 What is claimed is:

2 Add A1 } 1. A system for delivering electronic programming to a user,
3 the system comprising:

4 a printed matter having at least one sensor and a
5 transmitter for transmitting a coded signal in
6 response to an actuation of said sensor;
7 an intelligent controller having associated therewith a
8 receiver for receiving said coded signal and a
9 means for accessing programming material; and
10 a display unit for presenting said programming
11 material;

12 wherein said user actuates said sensor to cause said
13 intelligent controller to access said programming
14 material and said display unit to present said
15 programming material to said user.

- 16 2. A system as defined in claim 1 wherein said sensor comprises
17 a touch sensor.
18 3. A system as defined in claim 1 wherein said sensor comprises
19 a capacitive touch sensor.
20 4. A system as defined in claim 1 wherein said sensor comprises
21 a conductive touch sensor.
22 5. A system as defined in claim 1 wherein said sensor comprises
23 a page sensor.
24 6. A system as defined in claim 1 wherein said printed matter
25 includes both a page sensor and a touch sensor.

1 7. A system as defined in claim 1 wherein said printed matter
2 includes a pad having a plurality of touch sensors.

3 8. A system as defined in claim 1 wherein said printed matter
4 includes a plurality of pads, each having a plurality of
5 touch sensors.

6 9. A system as defined in claim 1 wherein said intelligent
7 controller includes a microprocessor.

8 10. A system as defined in claim 1 wherein said intelligent
9 controller has associated therewith a memory means for
10 storing programming material.

11 11. A system as defined in claim 10 wherein said memory means
12 comprises a magnetic disk.

13 12. A system as defined in claim 10 wherein said memory means
14 comprises a PCMCIA card.

15 13. A system as defined in claim 10 wherein said memory means
16 comprises a flash RAM.

17 14. A system as defined in claim 10 wherein said memory means
18 comprises a cache.

19 15. A system as defined in claim 10 wherein said memory means
20 comprises a CD-ROM.

21 16. A system as defined in claim 10 wherein said memory means is
22 selected from the group consisting of: a ROM; a WORM disk; a
23 floppy disk; a multi-layer optical disk; a magneto-optical
24 disk; an IC card; a magnetic bubble memory; a sequential
25 access memory; a magnetic tape; a magnetic drum; a magneto-

1 optical drum; a static RAM; and a dynamic RAM.

2 17. A system as defined in claim 1 wherein said intelligent
3 controller includes a removable memory means.

4 18. A system as defined in claim 17 wherein said printed matter
5 and said removable memory means are supplied to, or
6 purchased by, the user as a set.

7 19. A system as defined in claim 1 wherein said means for
8 accessing programming material operates via a data link.

9 20. A system as defined in claim 19 wherein said data link
10 comprises a telephone line.

11 21. A system as defined in claim 19 wherein said data link
12 comprises a computer network.

13 22. A system as defined in claim 19 wherein said data link
14 comprises an ISDN network.

15 23. A system as defined in claim 19 wherein said data link
16 comprises an ethernet network.

17 24. A system as defined in claim 19 wherein said data link
18 comprises a CATV line.

19 25. A system as defined in claim 1 wherein said intelligent
20 controller has associated therewith a buffer for temporarily
21 storing the programming material.

22 26. A system as defined in claim 1 wherein said intelligent
23 controller includes means for decompressing compressed
24 programming material.

25 27. A system as defined in claim 1 wherein said display unit

1 comprises a video display.

2 28. A system as defined in claim 1 wherein said display unit
3 comprises an audio transducer.

4 29. A system as defined in claim 1 wherein said display unit
5 comprises a flat panel display.

6 30. A system as defined in claim 29 wherein said flat panel
7 display is embedded within said printed matter.

8 31. A system as defined in claim 1 wherein said display unit has
9 associated therewith a buffer for temporarily storing
10 programming material.

11 32. A system as defined in claim 1 wherein said display unit has
12 associated therewith means for decompressing compressed
13 programming material.

14 33. A system as defined in claim 1 wherein said display unit
15 comprises a CATV converter, or wireless cable converter, and
16 a television set coupled thereto.

17 34. A system as defined in claim 1 wherein said display unit
18 comprises a personal computer.

19 35. A system as defined in claim 34 wherein said personal
20 computer includes a CD-ROM for storing programming material.

21 36. A system as defined in claim 34 wherein said personal
22 computer includes means for decompressing compressed
23 programming material.

24 37. A system as defined in claim 1 wherein said intelligent
25 controller and said display unit each comprise portions of a

1 personal computer.

2 38. A system as defined in claim 1 wherein said programming
3 material includes entertainment programming.

4 39. A system as defined in claim 1 wherein said programming
5 material includes educational programming.

6 40. A system as defined in claim 1 wherein said programming
7 material supplements information contained in said printed
8 matter.

9 41. A system as defined in claim 1 wherein said programming
10 material includes commercial programming.

11 42. A system as defined in claim 1 wherein said programming
12 material includes promotional programming.

13 43. A system as defined in claim 1 wherein said programming
14 material includes informational programming.

15 44. A system as defined in claim 1 wherein said transmitter and
16 receiver communicate via an energy pathway.

17 45. A system as defined in claim 44 wherein said energy pathway
18 comprises a conductive cable.

19 46. A system as defined in claim 44 wherein said energy pathway
20 comprises an optical cable.

21 47. A system as defined in claim 44 wherein said energy pathway
22 comprises a capacitively coupled link.

23 48. A system as defined in claim 1 wherein said transmitter and
24 receiver communicate via a wireless RF link.

25 49. A system as defined in claim 1 wherein said transmitter and

1 receiver communicate via an IR link.

2 50. A system for displaying programming to a user, the system
3 comprising:

4 a printed matter having at least one machine
5 recognizable feature;

6 a feature recognition unit having associated therewith
7 a means for recognizing said feature and a
8 transmitter for transmitting a coded signal in
9 response to the recognition of said feature;

10 an intelligent controller having associated therewith a
11 receiver for receiving said coded signal and means
12 for accessing programming material; and
13 a display unit for presenting said programming
14 material;

15 wherein said recognition unit, in response to the
16 recognition of said feature, causes said
17 intelligent controller to access said programming
18 material and said display unit to execute or
19 display said programming material.

20 51. A system as defined in claim 50 wherein said intelligent
21 controller includes a microprocessor.

22 52. A system as defined in claim 50 wherein said intelligent
23 controller has associated therewith a memory means for
24 storing programming material.

25 53. A system as defined in claim 52 wherein said memory means

1 comprises a magnetic disk.

2 54. A system as defined in claim 52 wherein said memory means
3 comprises a PCMCIA card.

4 55. A system as defined in claim 52 wherein said memory means
5 comprises a flash RAM.

6 56. A system as defined in claim 52 wherein said memory means
7 comprises a cache.

8 57. A system as defined in claim 52 wherein said memory means
9 comprises a CD-ROM.

10 58. A system as defined in claim 52 wherein said memory means is
11 selected from the group consisting of: a ROM; a WORM disk; a
12 floppy disk; a multi-layer optical disk; a magneto-optical
13 disk; an IC card; a magnetic bubble memory; a sequential
14 access memory; a magnetic tape; a magnetic drum; a magneto-
15 optical drum; a static RAM; and a dynamic RAM.

16 59. A system as defined in claim 50 wherein said intelligent
17 controller includes a removable memory means.

18 60. A system as defined in claim 59 wherein said printed matter
19 and said removable memory means are supplied to, or
20 purchased by, the user as a set.

21 61. A system as defined in claim 50 wherein said means for
22 accessing programming material operates via a data link.

23 62. A system as defined in claim 61 wherein said data link
24 comprises a telephone line.

25 63. A system as defined in claim 61 wherein said data link

1 comprises a computer network.

2 64. A system as defined in claim 61 wherein said data link
3 comprises an ISDN network.

4 65. A system as defined in claim 61 wherein said data link
5 comprises an ethernet network.

6 66. A system as defined in claim 61 wherein said data link
7 comprises a CATV line.

8 67. A system as defined in claim 50 wherein said intelligent
9 controller has associated therewith a buffer for temporarily
10 storing the programming material.

11 68. A system as defined in claim 50 wherein said intelligent
12 controller includes means for decompressing compressed
13 programming material.

14 69. A system as defined in claim 50 wherein said display unit
15 comprises a video display.

16 70. A system as defined in claim 50 wherein said display unit
17 comprises an audio transducer.

18 71. A system as defined in claim 50 wherein said display unit
19 comprises a flat panel display.

20 72. A system as defined in claim 71 wherein said flat panel
21 display is embedded within said printed matter.

22 73. A system as defined in claim 50 wherein said display unit
23 has associated therewith a buffer for temporarily storing
24 programming material.

25 74. A system as defined in claim 50 wherein said display unit

1 has associated therewith means for decompressing compressed
2 programming material.

3 75. A system as defined in claim 50 wherein said display unit
4 comprises a CATV converter, or wireless cable converter, and
5 a television set coupled thereto.

6 76. A system as defined in claim 50 wherein said display unit
7 comprises a personal computer.

8 77. A system as defined in claim 76 wherein said personal
9 computer includes a CD-ROM for storing programming material.

10 78. A system as defined in claim 76 wherein said personal
11 computer includes means for decompressing compressed
12 programming material.

13 79. A system as defined in claim 50 wherein said intelligent
14 controller and said display unit each comprise portions of a
15 personal computer.

16 80. A system as defined in claim 50 wherein said programming
17 material includes entertainment programming.

18 81. A system as defined in claim 50 wherein said programming
19 material includes educational programming.

20 82. A system as defined in claim 50 wherein said programming
21 material supplements information contained in said printed
22 matter.

23 83. A system as defined in claim 50 wherein said programming
24 material includes commercial programming.

25 84. A system as defined in claim 50 wherein said programming

1 material includes promotional programming.

2 85. A system as defined in claim 50 wherein said programming
3 material includes informational programming.

4 86. A system as defined in claim 50 wherein said transmitter and
5 receiver communicate via an energy pathway.

6 87. A system as defined in claim 86 wherein said energy pathway
7 comprises a conductive cable.

8 88. A system as defined in claim 86 wherein said energy pathway
9 comprises an optical cable.

10 89. A system as defined in claim 86 wherein said energy pathway
11 comprises a capacitively coupled link.

12 90. A system as defined in claim 50 wherein said transmitter and
13 receiver communicate via a wireless RF link.

14 91. A system as defined in claim 50 wherein said transmitter and
15 receiver communicate via an IR link.

16 92. A system as defined in claim 50 wherein said feature
17 comprises a bar code.

18 93. A system as defined in claim 50 wherein said feature
19 comprises an invisible bar code.

20 94. A system as defined in claim 50 comprises wherein said
21 feature comprises a magnetic code.

22 95. A system as defined in claim 50 wherein said feature
23 comprises printed indicia.

24 96. A system as defined in claim 50 wherein said recognition
25 unit comprises a hand-held unit.

1 97. A system as defined in claim 96 wherein said hand-held
2 recognition unit includes a CCD camera.

3 98. A system as defined in claim 96 wherein said hand-held
4 recognition unit includes a bar code reader.

5 99. A system as defined in claim 96 wherein said hand-held
6 recognition unit comprises a magnetic detector.

7 100. A system as defined in claim 96 wherein said hand-held
8 recognition unit comprises a scanner/mouse.

9 101. A system for delivering electronic programming to a user,
10 the system comprising:

11 a printed matter having associated therewith at least
12 one sensor, a controller responsive to an
13 actuation of said sensor, and a transmitter
14 responsive to said controller for transmitting a
15 coded signal; and

16 a display unit having associated therewith a receiver
17 for receiving said coded signal, means for
18 accessing programming material in response
19 thereto, and means for displaying or executing
20 said programming material; and

21 wherein said user actuates said sensor to cause said
22 programming material to be accessed and displayed
23 or executed.

24 102. A system as defined in claim 101 wherein said controller
25 includes a microprocessor.

1 103. A system as defined in claim 101 wherein said display unit
2 further has associated therewith a memory means for storing
3 programming material.

4 104. A system as defined in claim 103 wherein said memory means
5 comprises a magnetic disk.

6 105. A system as defined in claim 103 wherein said memory means
7 comprises a PCMCIA card.

8 106. A system as defined in claim 103 wherein said memory means
9 comprises a flash RAM.

10 107. A system as defined in claim 103 wherein said memory means
11 comprises a cache.

12 108. A system as defined in claim 103 wherein said memory means
13 comprises a CD-ROM.

14 109. A system as defined in claim 101 wherein said memory means
15 is selected from the group consisting of: a ROM; a WORM
16 disk; a floppy disk; a multi-layer optical disk; a magneto-
17 optical disk; an IC card; a magnetic bubble memory; a
18 sequential access memory; a magnetic tape; a magnetic drum;
19 a magneto-optical drum; a static RAM; and a dynamic RAM.

20 110. A system as defined in claim 101 wherein said further has
21 associated therewith a removable memory means.

22 111. A system as defined in claim 110 wherein said printed matter
23 and said removable memory means are supplied to, or
24 purchased by, the user as a set.

25 112. A system as defined in claim 101 wherein said means for

1 accessing programming material operates via a data link.

2 113. A system as defined in claim 112 wherein said data link
3 comprises a telephone line.

4 114. A system as defined in claim 112 wherein said data link
5 comprises a computer network.

6 115. A system as defined in claim 112 wherein said data link
7 comprises an ISDN network.

8 116. A system as defined in claim 112 wherein said data link
9 comprises an ethernet network.

10 117. A system as defined in claim 112 wherein said data link
11 comprises a CATV line.

12 118. A system as defined in claim 101 wherein said controller has
13 associated therewith a power-down or slow-down circuit for
14 reducing power consumption in said controller.

15 119. A system as defined in claim 101 wherein said controller has
16 associated therewith a solar cell for powering said
17 controller..

18 120. A system as defined in claim 101 wherein said display unit
19 comprises a video display.

20 121. A system as defined in claim 101 wherein said display unit
21 comprises an audio transducer.

22 122. A system as defined in claim 101 wherein said display unit
23 comprises a flat panel display.

24 123. A system as defined in claim 122 wherein said flat panel
25 display is embedded within said printed matter.

1 124. A system as defined in claim 101 wherein said display unit
2 has associated therewith a buffer for temporarily storing
3 programming material.

4 125. A system as defined in claim 101 wherein said display unit
5 has associated therewith means for decompressing compressed
6 programming material.

7 126. A system as defined in claim 101 wherein said display unit
8 comprises a CATV converter, or wireless cable converter, and
9 a television set coupled thereto.

10 127. A system as defined in claim 101 wherein said display unit
11 comprises a personal computer.

12 128. A system as defined in claim 127 wherein said personal
13 computer includes a CD-ROM for storing programming material.

14 129. A system as defined in claim 127 wherein said personal
15 computer includes means for decompressing compressed
16 programming material.

17 130. A system as defined in claim 101 wherein said controller and
18 said display unit each comprise portions of a personal
19 computer.

20 131. A system as defined in claim 101 wherein said programming
21 material includes entertainment programming.

22 132. A system as defined in claim 101 wherein said programming
23 material includes educational programming.

24 133. A system as defined in claim 101 wherein said programming
25 material supplements information contained in said printed

1 matter.

2 134. A system as defined in claim 101 wherein said programming
3 material includes commercial programming.

4 135. A system as defined in claim 101 wherein said programming
5 material includes promotional programming.

6 136. A system as defined in claim 101 wherein said programming
7 material includes informational programming.

8 137. A system as defined in claim 101 wherein said transmitter
9 and receiver communicate via an energy pathway.

10 138. A system as defined in claim 137 wherein said energy pathway
11 comprises a conductive cable.

12 139. A system as defined in claim 137 wherein said energy pathway
13 comprises an optical cable.

14 140. A system as defined in claim 137 wherein said energy pathway
15 comprises a capacitively coupled link.

16 141. A system as defined in claim 101 wherein said transmitter
17 and receiver communicate via a wireless RF link.

18 142. A system as defined in claim 101 wherein said transmitter
19 and receiver communicate via an IR link.

20 143. A method of providing, accessing or utilizing electronic
21 media services, the method comprising the steps of:

22 providing a printed matter having at least one sensor

23 associated therewith;

24 providing or programming an intelligent controller to,

25 in response to an actuation of said sensor,

perform a pre-programmed command; and
executing said pre-programmed command to access or
control an electronic media.

144. A method of providing electronic programming material, the
method comprising the steps of:

providing a printed matter to a potential customer;
pre-programming an intelligent controller to access or
control the transmission of electronic programming
material in response to an event wherein the
customer interacts with the printed matter in a
particular manner; and
displaying or executing said programming material in
response to the intelligent controller.

145. A method as defined in claim 144 wherein said printed matter
comprises a low-cost, throw away publication.

146. A method as defined in claim 144 wherein said customer
utilizes a feature recognition unit to interact with said
printed matter.

147. A method of providing or accessing shop-at-home services,
the method including the steps of:

incorporating within a printed catalogue at least one
sensor or machine-recognizable feature;
programming a controller to execute a pre-programmed
command in response to an event wherein a customer
interacts with said sensor or feature; and

1 responding to the execution of said pre-programmed
2 command.

3 148. A method as defined in claim 147 wherein responding
4 comprises presenting or delivering commercial programming to
5 the customer.

6 149. A method as defined in claim 147 wherein responding
7 comprises presenting or delivering promotional programming
8 to the customer.

9 150. A method as defined in claim 147 wherein responding
10 comprises contacting the customer by telephone.

11 151. A method as defined in claim 147 wherein responding
12 comprises providing an electronic menu to the customer.

13 152. A method as defined in claim 151, further comprising the
14 step of responding to the customer's menu selection(s).

15 153. An improved method of instruction, said method including the
16 steps of:

17 providing a printed textbook having at least one sensor
18 or machine-recognizable feature associated
19 therewith;

20 providing a means, distinct from said textbook, for
21 executing a pre-programmed command in response to
22 an event wherein a reader of the textbook
23 interacts with said sensor or feature; and
24 responding to the execution of said command.

25 154. An improved method of instruction as defined in claim 153

- 1 wherein responding comprises: causing or controlling the
2 delivery or presentation of multimedia material or other
3 information related to that in the textbook to the reader.
- 4 155. An improved method of instruction as defined in claim 153
5 wherein responding comprises: forming a communication link
6 between the reader and a tutor or consultant.
- 7 156. A low cost, throw-away printed matter useful for accessing
8 electronic media services, said printed matter including:
9 at least one sensor; and
10 means, responsive to an actuation of said sensor, for
11 transmitting a coded signal indicative of said
12 sensor.
- 13 157. A feature recognition unit useful, in combination with a
14 printed matter, for accessing electronic media services,
15 said recognition unit comprising:
16 means for recognizing features on said printed matter;
17 and
18 means, responsive to the recognition of a feature, for
19 transmitting a coded signal indicative of said
20 recognized feature.
- 21 158. A feature recognition unit as defined in claim 157 wherein
22 said means for recognizing reads bar codes.
- 23 159. A feature recognition unit as defined in claim 157 wherein
24 said means for recognizing reads printed indicia.
- 25 160. A feature recognition unit as defined in claim 157 wherein

1 said means for recognizing reads magnetic codes.
2 161. A feature recognition unit as defined in claim 157 wherein
3 said means for recognizing comprises a CCD camera.
4 162. A feature recognition unit as defined in claim 157 wherein
5 said means for recognizing comprises a bar code reader.
6 163. A feature recognition unit as defined in claim 157, further
7 including a microprocessor.
8 164. A system for delivering an electronic advertisement to a
9 user, the system comprising:

10 a printed advertisement having associated therewith at
11 least one sensor or machine-recognizable feature,
12 a controller, responsive to an actuation of said
13 sensor or a recognition of said machine-
14 recognizable feature, and a transmitter,
15 responsive to said controller, for transmitting a
16 coded signal; and

17 a display unit including a receiver for receiving said
18 coded signal and means for providing said user
19 with said electronic advertisement related to said
20 printed advertisement.

21 165. A system for delivering information services to a user, the
22 system comprising:

23 a printed reference having associated therewith at
24 least one sensor or machine-recognizable feature,
25 a controller, responsive to an actuation of said

1 sensor or a recognition of said machine-
2 recognizable feature, and a transmitter,
3 responsive to said controller, for transmitting a
4 coded signal; and

5 a display unit including a receiver for receiving said
6 coded signal and means for providing said user
7 with said information services related to said
8 printed reference.

9 166. A system for delivering information services as defined in
10 claim 165 wherein said display unit is contained within a
11 personal communicator device.

12 167. A system for delivering information services as defined in
13 claim 165 wherein said display unit is contained within a
14 remote pager device.